

Appendix A

ALLERGEN SOURCE	SYSTEMATIC AND ORIGINAL NAMES	MW kDa	SEQ	ACCESSION NO. OR REFERENCES
WEED POLLENS				
<i>Asterales</i>				
Ambrosia artemisiifolia (short ragweed)	Amb a 1; antigen E	38	C	8,20
	Amb a 2; antigen K	38	C	8,21
	Amb a 3; Ra3	11	C	22
	Amb a 5; Ra5	5	C	11,23
	Amb a 6; Ra6	10	C	24,25
	Amb a 7; Ra7	12	P	26
	Amb a ?	11	C	27
Ambrosia trifida (giant ragweed)	Amb t 5; Ra5G	4.4	C	9,10,28
Artemisia vulgaris (mugwort)	Art v 1	27-29	C	28A
	Art v 2	35	P	29
Helianthus annuus (sunflower)	Hel a 1	34	-	29a
	Hel a 2; profilin	15.7	C	Y15210
Mercurialis annua	Mer a 1; profilin	14-15	C	Y13271
GRASS POLLENS				
<i>Poales</i>				
Cynodon dactylon (Bermuda grass)	Cyn d 1	32	C	30,S83343
	Cyn d 7		C	31,X91256
	Cyn d 12; profilin	14	C	31a,Y08390
Dactylis glomerata (orchard grass)	Dac g 1; AgDg1	32	P	32
	Dac g 2	11	C	33,S45354
	Dac g 3		C	33a,U25343
	Dac g 5	31	P	34
Holcus lanatus (velvet grass)	Hol l 1		C	Z27084,Z68893
Lolium perenne (rye grass)	Lol p 1; group I	27	C	35,36
	Lol p 2; group II	11	C	37,37a,X73363
	Lol p 3; group III	11	C	38
	Lol p 5; Lol p IX, Lol p Ib	31/35		34,39
	Lol p 11; trypsin inh. Related	16		39a
Phalaris aquatica (canary grass)	Pha a 1		C	40,S80654
Phleum pratense (timothy grass)	Phl p 1	27	C	X78813
	Phl p 2		C	41,X75925
	Phl p 4		P	41A
	Phl p 5; Ag25	32	C	42
	Phl p 6		C	43,Z27082
	Phl p 12; profilin		C	44,X77583

	Phl p 13; polygalacturonase	55-60	C	AJ238848
Poa pratensis (Kentucky blue grass)	Poa p 1; group I	33	P	46
	Poa p 5	31/34	C	34,47
Sorghum halepense (Johnson grass)	Sor h 1		C	48
TREE POLLENS				
<i>Fagales</i>				
Alnus glutinosa (alder)	Aln g 1	17	C	S50892
Betula verrucosa (birch)	Bet v 1	17	C	see list of isoallergens M65179 X79267 X87153/S854819 AF135127
	Bet v 2; profilin	15	C	
	Bet v 3	8	C	
	Bet v 4		C	
	Bet v 5; isoflavone reductase homologue	33.5	C	
	Bet v 7; cyclophilin	18	C	P P81531
Carpinus betulus (hornbeam)	Car b 1	17	C	51
Castanea sativa (chestnut)	Cas s 1; Bet v 1 homologue	22	P	52
	Cas s5; chitinase			
Corylus avellana (hazel)	Cor a 1	17	C	53
Quercus alba (white oak)	Que a 1	17	P	54
Cryptomeria japonica (sugi)	Cry j 1	41-45	C	55,56
	Cry j 2		C	57,D29772
Juniperus ashei (mountain cedar)	Jun a 1	43	P	P81294
	Jun a 3	30	P	P81295
Juniperus oxycedrus (prickly juniper)	Jun o 2; calmodulin-like	29	C	AF031471
Juniperus sabinoides (mountain cedar)	Jun s 1	50	P	58
Juniperus virginiana (eastern red cedar)	Jun v 1	43	P	P81825
<i>Oleales</i>				
Fraxinus excelsior (ash)	Fra e 1	20	P	58A
Ligustrum vulgare (privet)	Lig v 1	20	P	58A
Olea europea (olive)	Ole e 1;	16	C	59,60
	Ole e 2; profilin	15-18	C	60A
	Ole e 3;	9.2		60B
	Ole e 4;	32	P	P80741

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	Ole e 5; superoxide dismutase Ole e 6;	16 10	P C	P80740 U86342
<i>Syringa vulgaris</i> (lilac)	Syr v 1	20	P	58A
MITES				
<i>Acarus siro</i> (mite)	Aca s 13; fatty acid-bind. prot.	14*	C	AJ006774
<i>Blomia tropicalis</i> (mite)	Blo t 5; Blo t 12; Bt11a Blo t 13; Bt6 fatty acid-binding prot		C C C	U59102 U27479 U58106
<i>Dermatophagoides pteronyssinus</i> (mite)	Der p 1; antigen P1 Der p 2; Der p 3; trypsin Der p 4; amylase Der p 5; Der p 6; chymotrypsin Der p 7; Der p 8; glutathione transferase Der p 9; collagenolytic serine prot. Der p 10; tropomyosin Der p 14; apolipoprotein like p	25 14 28/30 60 14 25 22-28 36	C C C C P C C C C	61 62 63 64 65 66 67 67A 67B Y14906 Epton p.c.
<i>Dermatophagoides microceras</i> (mite)	Der m 1;	25	P	68
<i>Dermatophagoides farinae</i> (mite)	Der f 1; Der f 2; Der f 3; Der f 10; tropomyosin Der f 11; paramyosin Der f 14; Mag3, apolipoprotein	25 14 30 98	C C C C C C	69 70,71 63 72 72a D17686
<i>Euroglyphus maynei</i> (mite)	Eur m 14; apolipoprotein	177	C	AF149827
<i>Lepidoglyphus destructor</i> (storage mite)	Lep d 2.0101; Lep d 2.0102;	15 15	C C	73,74,75 75
ANIMALS				
<i>Bos domesticus</i> (domestic cattle) (see also foods)	Bos d 2; Ag3, lipocalin Bos d 4; alpha-lactalbumin Bos d 5; beta-lactoglobulin Bos d 6; serum albumin Bos d 7; immunoglobulin Bos d 8; caseins	20 14.2 18.3 67 160 20-30	C C C C	76, L42867 M18780 X14712 M73993 77 77
<i>Canis familiaris</i> (Canis domesticus (dog))	Can f 1; Can f 2; Can f ?; albumin	25 27	C C C	78,79 78,79 S72946
<i>Equus caballus</i> (domestic horse)	Equ e 1; lipocalin Equ e 2; lipocalin	25 18.5	C P	U70823 79A, 79B
<i>Felis domesticus</i>	Fel d 1; cat-1	38	C	15

(cat saliva)				
Mus musculus (mouse urine)	Mus m 1; MUP	19	C	80,81
Rattus norvegicus (rat urine)	Rat n 1	17	C	82,83
FUNGI				
Ascomycota				
Dothidiales				
Alternaria alternata	Alt a 1;	28	C	U82633
	Alt a 2;	25	C	U87807,U87808
	Alt a 3; heat shock protein	70	C	X78222,
	Alt a 6; ribosomal protein	11	C	U87806
	Alt a 7; YCP4 protein	22	C	X78225
	Alt a 10; aldehyde dehydrogenase	53	C	X78227, P42041
	Alt a 11; enolase	45	C	U82437
	Alt a 12;acid.ribosomal prot P1	11	C	X84216
Cladosporium herbarum	Cla h 1;	13		83a,83b
	Cla h 2;	23		83a,83b
	Cla h 3; aldehyde dehydrogenase	53	C	X78228
	Cla h 4; ribosomal protein	11	C	X78223
	Cla h 5; YCP4 protein	22	C	X78224
	Cla h 6; enolase	46	C	X78226
	Cla h 12;acid.ribosomal prot P1	11	C	X85180
Eurotiales				
	Asp f 13; alkaline serine proteinase	34		84
Aspergillus Fumigatus	Asp f 1;	18	C	83781,S39330
	Asp f 2;	37	C	U56938
	Asp f 3; peroxisomal protein	19	C	U20722
	Asp f 4;	30	C	AJ001732
	Asp f 5; metalloprotease	42	C	Z30424
	Asp f 6; Mn superoxide dismutase	26.5	C	U53561
	Asp f 7;	12	C	AJ223315
	Asp f 8; ribosomal protein P2	11	C	AJ224333
	Asp f 9;	34	C	AJ223327
	Asp f 10; aspartic protease	34		X85092
	Asp f 11; peptidyl-prolyl isom	24		84a
	Asp f 12; heat shock prot. P70	65	C	U92465
	Asp f 13; alkaline serine proteinase	34		84b
	Asp f 15;	16	C	AJ002026
	Asp f 16;	43	C	g3643813
	Asp f 17;	34	C	AJ224865
	Asp f 18; vacuolar serine	90		84c
	Asp f ?;	55	P	85
	Asp f ?;		P	86
Aspergillus niger	Asp n 14; beta-xylosidase	105	C	AF108944
	Asp n 18; vacuolar serine	34	C	84b

	proteinase Asp n ?;	85	C	Z84377
Aspergillus oryzae	Asp o 2; TAKA-amylase A	53	C	D00434,M33218
	Asp o 13; alkaline serine proteinase	34	C	X17561
Penicillium brevicompactum	Pen b 13; alkaline serine Proteinase	33		86a
Penicillium citrinum	Pen c 1; heat shock protein P70	70	C	U64207
	Pen c 3; peroxisomal membrane protein			86b
	Pen c 13; alkaline serine proteinase	33		86a
Penicillium notatum	Pen n 1; N-acetyl glucosaminidase	68		87
	Pen n 13; alkaline serine proteinase	34		89
	Pen n 18; vacuolar serine proteinase	32		89
Penicillium oxalicum	Pen o 18; vacuolar serine proteinase	34		89
Onygenales				
Trichophyton rubrum	Tri r 2;		C	90
	Tri r 4; serine protease		C	90
Trichophyton tonsurans	Tri t 1;	30	P	91
	Tri t 4; serine protease	83	C	90
Saccharomycetales				
Candida albicans	Cand a 1	40	C	88
Candida boidinii	Cand b 2	20	C	J04984,J04985
Basidiomycota				
Basidiolaelastomycetes				
Malassezia furfur	Mal f 1;	21	C	91a AB011804
	Mal f 2; MF1 peroxisomal membrane protein			
	Mal f 3; MF2 peroxisomal membrane protein	20	C	AB011805
	Mal f 4;	35	C	Takesako, p.c. AJ011955 AJ011956
	Mal f 5;	18*	C	
	Mal f 6; cyclophilin homologue	17*	C	
Basidiomycetes				
Psilocybe cubensis	Psi c 1; Psi c 2; cyclophilin	16		91b
Coprinus comatus (shaggy cap)	Cop c 1;	11	C	AJ132235 Brander, p.c. Brander, p.c. Brander, p.c.
	Cop c 2;			
	Cop c 3;			
	Cop c 5;			
	Cop c 7;			
INSECTS				
Aedes aegyptii (mosquito)	Aed a 1; apyrase	68	C	L12389
	Aed a 2;	37	C	M33157

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Apis mellifera (honey bee)	Api m 1; phospholipase A2	16	C	92
	Api m 2; hyaluronidase	44	C	93
	Api m 4; melittin	3	C	94
	Api m 6;	7-8	P	Kettner, p.c.
Bombus pennsylvanicus (bumble bee)	Bom p 1; phospholipase	16	P	95
	Bom p 4; protease		P	95
Blattella germanica (German cockroach)	Bla g 1; Bd90k		C	96
	Bla g 2; aspartic protease	36	C	
	Bla g 4; calycin	21	C	97
	Bla g 5; glutathione transf.	22	C	98
	Bla g 6; troponin C	27	C	98
Periplaneta americana (American cockroach)	Per a 1; Cr-PII	72-78	C	98A
	Per a 3; Cr-PI		C	
	Per a 7; tropomyosin	37	C	Y14854
Chironomus thummi thummi (midges)	Chi t 1-9; hemoglobin	16	C	99
	Chi t 1.01; component III	16	C	P02229
	Chi t 1.02; component IV	16	C	P02230
	Chi t 2.0101; component I	16	C	P02221
	Chi t 2.0102; component IA	16	C	P02221
	Chi t 3; component II-beta	16	C	P02222
	Chi t 4; component IIIA	16	C	P02231
	Chi t 5; component VI	16	C	P02224
	Chi t 6.01; component VIIA	16	C	P02226
	Chi t 6.02; component IX	16	C	P02223
	Chi t 7; component VIIIB	16	C	P02225
	Chi t 8; component VIII	16	C	P02227
	Chi t 9; component X	16	C	P02228
Dolichovespula maculata (white face hornet)	Dol m 1; phospholipase A1	35	C	100
	Dol m 2; hyaluronidase	44	C	101
	Dol m 5; antigen 5	23	C	102, 103
Dolichovespula arenaria (yellow hornet)	Dol a 5; antigen 5	23	C	104
Polistes annularis (wasp)	Pol a 1; phospholipase A1	35	P	105
	Pol a 2; hyaluronidase	44	P	105
	Pol a 5; antigen 5	23	C	104
Polistes dominulus (Mediterranean paper wasp)	Pol d 1; Pol d 4; serine protease Pol d 5;	32-34	C	DR Hoffman DR Hoffman P81656
Polistes exclamans (wasp)	Pol e 1; phospholipase A1	34	P	107
	Pol e 5; antigen 5	23	C	104
Polistes fuscatus (wasp)	Pol f 5; antigen 5	23	C	106
Polistes metricus (wasp)	Pol m 5; antigen 5	23	P	106
Vespa crabro (European hornet)	Vesp c 1; phospholipase	34	P	107
	Vesp c 5.0101; antigen 5	23	C	106

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	Ves p c 5.0102; antigen 5	23	C	106
Vespa mandarina (giant asian hornet)	Ves p m 1.01; Ves p m 1.02; Ves p m 5;			DR Hoffman DR Hoffman P81657
Vespula flavopilosa (yellowjacket)	Ves f 5; antigen 5	23	C	106
Vespula germanica (yellowjacket)	Ves g 5; antigen 5	23	C	106
Vespula maculifrons (yellowjacket)	Ves m 1; phospholipase A1 Ves m 2; hyaluronidase Ves m 5; antigen 5	33.5 44 23	C P 23	108 109 104
Vespula pennsylvanica (yellowjacket)	Ves p 5; antigen 5	23	C	106
Vespula squamosa (yellowjacket)	Ves s 5; antigen 5	23	C	106
Vespula vidua (wasp)	Ves vi 5;	23	C	106
Vespula vulgaris (yellowjacket)	Ves v 1; phospholipase A1 Ves v 2; hyaluronidase Ves v 5; antigen 5	35 44 23	C P C	105A 105A 104
Myrmecia pilosula (Australian jumper ant)	Myr p 1, Myr p 2;		C C	X70256 S81785
Solenopsis geminata (tropical fire ant)	Sol g 2; Sol g 4			DR Hoffman DR Hoffman
Solenopsis invicta (fire ant)	Sol i 2; Sol i 3; Sol i 4;	13 24 13	C C C	110,111 110 110
Solenopsis saevissima (brazilian fire ant)	Sols 2;			DR Hoffman
FOODS				
Gadus callarias (cod)	Gad c 1; allergen M	12	C	112,113
Salmo salar (Atlantic salmon)	Sals 1; parvalbumin	12	C	X97824,X97825
Bos domesticus (domestic cattle)	Bos d 4; alpha-lactalbumin Bos d 5; beta-lactoglobulin Bos d 6; serum albumin Bos d 7; immunoglobulin Bos d 8; caseins	14.2 18.3 67 160 20-30	C C C C	M18780 X14712 M73993 77 77
Gallus domesticus (chicken)	Gal d 1; ovomucoid Gal d 2; ovalbumin Gal d 3; conalbumin (Ag22) Gal d 4; lysozyme Gal d 5; serum albumin	28 44 78 14 69	C C C C C	114,115 114,115 114,115 114,115 X60688

Metapenaeus ensis (shrimp)	Met e 1; tropomyosin		C	U08008
Penaeus aztecus (shrimp)	Pen a 1; tropomyosin	36	P	116
Penaeus indicus (shrimp)	Pen i 1; tropomyosin	34	C	117
Todarodes pacificus (squid)	Tod p 1; tropomyosin	38	P	117A
Haliotis Midac (abalone)	Hal m 1	49	-	117B
Apium graveolens (celery)	Api g 1; Bet v 1 homologue Api g 4; profilin Api g 5;	16* 55/58	C P	Z48967 AF129423 P81943
Brassica juncea (oriental mustard)	Bra j 1; 2S albumin	14	C	118
Brassica rapa (turnip)	Bra r 2; prohevein-like protein	25	?	P81729
Hordeum vulgare (barley)	Hor v 1; BMAI-1	15	C	119
Zea mays (maize, corn)	Zea m 14; lipid transfer prot.	9	P	P19656
Corylus avellana (hazelnut)	Cor a 1,0401; Bet v 1 homologue	17	C	AF136945
Malus domestica (apple)	Mal d 1; Bet v 1 homologue Mal d 3; lipid transfer protein	 9	C C	X83672 Pastorello
Pyrus communis (pear)	Pyr c 1; Bet v 1 homologue Pyr c 4; profilin Pyr c 5; isoflavone reductase homologue	18 14 33.5	C C C	AF05730 AF129424 AF071477
Oryza sativa (rice)	Ory s 1;		C	U31771
Persea americana (avocado)	Pers a 1; endochitinase	32	C	Z78202
Prunus armeniaca (apricot)	Pru ar 1; Bet v 1 homologue Pru ar 3; lipid transfer protein	 9	C P	U93165
Prunus avium (sweet cherry)	Pru av 1; Bet v 1 homologue Pru av 2; thaumatin homologue Pru av 4; profilin	 15	C C C	U66076 U32440 AF129425
Prunus persica (peach)	Pru p 3; lipid transfer protein	10	P	P81402
Sinapis alba (yellow mustard)	Sin a 1; 2S albumin	14	C	120
Glycine max (soybean)	Gly m 1.0101; HPS Gly m 1.0102; HPS Gly m 2 Gly m 3; profilin	7.5 7 8 14	P P P C	121 121 A57106 AJ223982

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Arachis hypogaea (peanut)	Ara h 1; vicilin	63.5	C	L34402
	Ara h 2; conglutin	17	C	L77197
	Ara h 3; glycinin	14	C	AF093541
	Ara h 4; glycinin	37	C	AF086821
	Ara h 5; profilin	15	C	AF059616
	Ara h 6; conglutin homolog	15	C	AF092846
	Ara h 7; conglutin homolog	15	C	AF091737
Actinidia chinensis (kiwi)	Act c 1; cysteine protease	30	P	P00785
Solanum tuberosum (potato)	Sol t 1; patatin	43	P	P15476
Bertholletia excelsa (Brazil nut)	Ber e 1; 2S albumin	9	C	P04403,M17146
Juglans regia (English walnut)	Jug r 1; 2S albumin	44	C	U66866
	Jug r 2; vicilin		C	AF066055
Ricinus communis (Castor bean)	Ric c 1; 2S albumin		C	P01089
OTHERS				
Anisakis simplex (nematode)	Ani s 1	24	P	A59069
	Ani s 2; paramyosin	97	C	AF173004
Ascaris suum (worm)	Asc s 1;	10	P	122
Aedes aegyptii (mosquito)	Aed a 1; apyrase	68	C	L12389
	Aed a 2;	37	C	M33157
Hevea brasiliensis (rubber)	Hev b 1; elongation factor	58	P	123,124
	Hev b 2; (1,3-glucanase	58	P	123,124
	Hev b 2; (1,3-glucanase	34/36	C	125
	Hev b 3	24	P	126,127
	Hev b 4; component of microhelix protein complex	100/110/115	P	128
	Hev b 5	16	C	U42640
	Hev b 6.01 hevein precursor	20	C	M36986/p02877
	Hev b 6.02 hevein	5	C	M36986/p02877
	Hev b 6.03 C-terminal fragment	14	C	M36986/p02877 U80598
	Hev b 7; patatin homologue	46	C	Y15042
	Hev b 8; profilin	14	C	AJ132580/AJ1
	Hev b 9; enolase	51	C	32581
				AJ249148
	Hev b 10; Mn-superoxide dismut	26	C	
Ctenocephalides felis (cat flea)	Cte f 1;	-	-	-
	Cte f 2; M1b	27	C	AF231352
Homo sapiens (human autoallergens)	Hom s 1;	73*	C	Y14314
	Hom s 2;	10.3*	C	X80909
	Hom s 3;	20.1*	C	X89985

	Hom s 4; Hom s 5;	36* 42.6*	C C	Y17711 P02538
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